

Application No. 10/699,422
Amendment dated October 13, 2005
Reply to Office Action of July 13, 2005

AMENDMENTS TO THE CLAIMS

Please cancel claim 35, without prejudice, as follows:

Listing of Claims

1. (Previously Presented) An apparatus for monitoring the operation of a heating device having at least one heating element moving periodically along a predefined path, the apparatus comprising:

a first sensor configured to sense the presence of the heating element as the heating element moves past the first sensor;

a second sensor mounted to allow movement of the heating element relative thereto and configured to sense a temperature associated with the heating element when said first sensor senses the presence of the heating element; and

a controller coupled with said first and second sensors and configured to monitor said first and second sensors and to perform a control function in response to the temperature sensed by said second sensor.

2. (Original) The apparatus of claim 1, wherein said controller is configured to indicate when the temperature sensed by said second sensor deviates from a predetermined temperature range.

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3. (Withdrawn) The apparatus of claim 1, wherein said controller is configured to monitor the temperature associated with the heating element over time and indicate when a rising or falling temperature is detected.
4. (Withdrawn) The apparatus of claim 1, wherein said controller is configured to monitor the respective temperatures associated with a plurality of said heating elements and compare the respective temperatures to one another.
5. (Original) The apparatus of claim 1, wherein said first sensor is a proximity sensor.
6. (Withdrawn) The apparatus of claim 1, wherein said first sensor is an eddy current sensor.
7. (Withdrawn) The apparatus of claim 1, wherein said first sensor is an optical sensor.

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8. (Previously Presented) An apparatus for sealing bags filled with articles, comprising:

a sealing station including a press plate and at least one heating element proximate said press plate and configured to move in a periodic motion relative to said press plate;

a conveyor adapted to transport a bag from said bag fill machine to said sealing station; and

a sealing station monitor comprising:

a first sensor configured to sense the presence of said heating element as said heating element moves past said first sensor,

a second sensor mounted to allow movement of said heating element relative thereto and configured to sense a temperature associated with said heating element when said first sensor senses the presence of said heating element, and

a controller coupled with said first and second sensors and configured to monitor said first and second sensors and to perform a control function in response to the temperature sensed by said second sensor.

9. (Original) The apparatus of claim 8, wherein said controller is configured to indicate when the temperature sensed by said second sensor deviates from a predetermined temperature range.

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10. (Withdrawn) The apparatus of claim 8, wherein said controller is configured to monitor the temperature associated with the heating element over time and indicate when a rising or falling temperature is detected.

11. (Withdrawn) The apparatus of claim 8, wherein said controller is configured to monitor the respective temperatures associated with a plurality of said heating elements and compare the respective temperatures to one another.

12. (Original) The apparatus of claim 8, wherein said first sensor is a proximity sensor.

13. (Withdrawn) The apparatus of claim 8, wherein said first sensor is an eddy current sensor.

14. (Withdrawn) The apparatus of claim 8, wherein said first sensor is an optical sensor.

15. (Original) The apparatus of claim 8, wherein said heating elements comprise heater blocks secured to a rotating belt.

16. (Original) The apparatus of claim 15, wherein said heater blocks are configured and arranged on said belt such that said heater blocks cooperate to seal an individual bag during each revolution of said belt.

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17. (Original) The apparatus of claim 15, wherein said heater blocks are configured and arranged on said belt to seal a bag in the form of a web or tube at desired intervals along said web or tube.

18-23 (Cancelled)

24. (Previously Presented) The apparatus of claim 1, wherein said controller is configured in one of the following manners:

(a) to indicate when the temperature sensed by said second sensor deviates from a predetermined temperature range;

(b) to monitor the temperature associated with the heating element over time and indicate when a rising or falling temperature is detected; or

(c) to monitor the respective temperatures associated with a plurality of said heating elements and compare the respective temperatures to one another.

25. (Previously Presented) The apparatus of claim 24, wherein said first sensor is a sensor selected from the group consisting of: a proximity sensor, an eddy current sensor, and an optical sensor.

26. (Canceled)

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27. (Withdrawn) The apparatus of claim 1, wherein said controller is configured in each of the following manners:

(a) to indicate when the temperature sensed by said second sensor deviates from a predetermined temperature range;

(b) to monitor the temperature associated with the heating element over time and indicate when a rising or falling temperature is detected; and

(c) to monitor the respective temperatures associated with a plurality of said heating elements and compare the respective temperatures to one another.

28. (Withdrawn) The apparatus of claim 27, wherein said first sensor is a sensor selected from the group consisting of: a proximity sensor, an eddy current sensor, and an optical sensor.

29. (Previously Presented) The apparatus of claim 8, wherein said controller is configured in one of the following manners:

(a) to indicate when the temperature sensed by said second sensor deviates from a predetermined temperature range;

(b) to monitor the temperature associated with the heating element over time and indicate when a rising or falling temperature is detected; or

(c) to monitor the respective temperatures associated with a plurality of said heating elements and compare the respective temperatures to one another.

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30. (Previously Presented) The apparatus of claim 29, wherein said first sensor is a sensor selected from the group consisting of: a proximity sensor, an eddy current sensor, and an optical sensor.

31. (Canceled)

32. (Withdrawn) The apparatus of claim 8, wherein said controller is configured in each of the following manners:

(a) to indicate when the temperature sensed by said second sensor deviates from a predetermined temperature range;

(b) to monitor the temperature associated with the heating element over time and indicate when a rising or falling temperature is detected; and

(c) to monitor the respective temperatures associated with a plurality of said heating elements and compare the respective temperatures to one another.

33. (Withdrawn) The apparatus of claim 32, wherein said first sensor is a sensor selected from the group consisting of: a proximity sensor, an eddy current sensor, and an optical sensor.

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34. (Previously Presented) An apparatus for monitoring the operation of a heating device having a plurality of heating elements moving periodically along at least one predefined path, the apparatus comprising:

a first sensor;

a second sensor adjacent said first sensor;

said first sensor configured to sense the presence of successive heating elements proximate said second sensor as the heating elements move past said sensors along the predefined path;

said second sensor configured to successively sense temperatures respectively associated with the heating elements as the heating elements move past said sensors;
and

a controller coupled with said first and second sensors and configured to monitor said first and second sensors and to perform a control function in response to the temperature sensed by said second sensor.

35. (Cancelled)